Climate Understanding & Resilience in the River Valley

Tijuana River Valley: A Threatened but Resilient Ecosystem

The Tijuana River Valley (TRV) contains the largest intact coastal wetland system in Southern California, despite intense pressure from development associated with being situated on an international border between two major metropolitan areas- San Diego (California, United States) and Tijuana (Baja California, Mexico). Unlike most other coastal ecosystems in the region, which have been fragmented or lost altogether, the Valley has contiguous beach, dune, salt marsh, riparian, and upland ecosystems. These habitats are largely in public ownership, managed by the National Oceanic & Atmospheric Administration, US Fish & Wildlife, California State Parks, County of San Diego, and City of San Diego.

Tijuana River Watershed drains 1,700 miles to the Pacific Ocean through the Tijuana River Valley.
(Map: TRV Recovery Strategy)

US-Mexico Border:
Tijuana adjacent to Border Field State Park

Oneonta Slough neighboring Imperial Beach, CA

Light-footed Clapper Rail
Habitat: Salt Marsh

California Least Tern
Habitat: Dune

Least Bell's Vireo
Habitat: Riparian

Salt Marsh
Bird's – Beak

A Climate Adaptation Strategy will help resource managers effectively protect the habitats of endangered and threatened species throughout the TRV.
(Flower Photo: Michael L. Charters, calflora.net / Vireo Photo: PRBO)

Why this project?

Climate change will effect the long-term ecological viability of natural ecosystems, while impacting the social and economic health of the surrounding communities. Fortunately, the Tijuana River Valley has been the focus of major restoration, conservation, and research efforts, making it a regional system able to accommodate impacts associated with our changing climate. In order to maintain and improve the resiliency of the TRV, we must strengthen our understanding of local vulnerabilities to climate change and develop adaptation strategies to address the impacts that threaten the future sustainability of important natural ecosystems and human communities.

Expertise from TRNERR's primary programs will be drawn on throughout the development and implementation of this project.

Education & Community Outreach

Research

Stewardship

Training

Project Objectives

The overarching goal is to begin a regionally committed process of adapting to climate change within the context of other environmental and socioeconomic changes. In order to achieve this goal, the Tijuana River National Estuarine Research Reserve (TRNERR) will collaborate with a diverse stakeholder group to conduct a vulnerability assessment that informs the development of an Adaptation Strategy addressing the impacts of climate change, specifically sea level rise and riverine flooding. This project will aid the Tijuana River Valley Recovery Team (TRVRT) in addressing one of its priority action areas listed in the Recovery Strategy as a way to help protect and enhance natural resources throughout the region. The development and implementation of this Climate Adaptation Strategy will help local communities adapt to climate change and increase ecosystem resiliency by providing jointly developed recommendations to coastal decision-makers on how to consider climate change in managing our natural resources and built infrastructure.

US Navy

Equestrian

In addition to being an important ecological resource, the Tijuana River Valley provides a wide variety of uses.

(Navy & Border Patrol Photos: KPBS)

Border Patrol

A Collaborative Approach

TRNERR will lead a team that builds on well-established partnerships through the TRVRT and is expanded to include perspectives among federal, state, regional, county, and local public agencies; universities; nonprofits; businesses; and landowners throughout the development and implementation of the Adaptation Strategy. This process will improve the ability of public agencies in the TRV to adapt to climate change, as well as offer tools for effective participatory ecosystem-based management in light of these changes.

Coastal Training Program
Tijuana River National Estuarine Research Reserve

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